



Consumer support for a public utilities commission in Hong Kong

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HIGHLIGHTS

- Hong Kong's regulatory process lacks transparency and public involvement.
- A survey data analysis indicates a majority support for a Hong Kong PUC.
- A Hong Kong PUC can be financially viable without public funding.
- A Hong Kong PUC proposal deserves further consideration.

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ABSTRACT

Hong Kong's electricity service is superbly reliable and price-reasonable when compared to those of the major cities in the OECD countries. Based on the rate of return regulation in the U.S., the current scheme of control agreement (SCA) regulating the two local integrated investor-owned utilities (IOUs) will expire in 2018 (or in 2023 after an optional 5-year extension), thus offering an opportune time to consider proposals with long lead time to modify or replace the SCA. The proposals made to date range from modifications of the SCA to electricity market restructure. These proposals, however, overlook two important aspects of regulatory governance: transparency and public involvement. This paper estimates consumer support for the proposal to establish a Hong Kong public utilities commission (HKPUC) to improve the current regulatory process. Based on the responses collected in mid-2014 via a face-to-face survey of 1100 Hong Kong residents, we find that at the 1.5% bill surcharge, about 70% the respondents are estimated to support an HKPUC. Thus, there is sufficient consumer support for a financially viable HKPUC, implying that Hong Kong should consider the possibility of establishing an HKPUC, notwithstanding the substantial challenges to be overcome prior to its implementation.

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1. Introduction

On 1 July 1997, Hong Kong became the Hong Kong Special Administrative Region (HKSAR) of China under the framework of “one country, two systems.” Over the past 17 years, it has achieved a remarkable economic performance rivaling that of the OECD countries. In 2013, per capita GDP of the 7.2 million residents was US\$37,860 and the unemployment rate 3.3%. It remains a bastion of capitalism and an exemplar of *laissez-faire* economics at its dynamic best, unfettered by government-imposed economic regulations. Indeed, “Hong Kong's economic freedom score of 89.3 [in

2014] keeps it atop the Index rankings for the 19th consecutive year”.¹ Nevertheless, since 1978 its electricity industry has been subject to a particular form of rate of return (ROR) regulation (Lam, 1996; Wu and Cheng, 2000).²

Hong Kong's average electricity rate in 2012 was HK\$1.025/kWh (=US\$0.131/kWh at the US\$1=HK\$7.8 pegged exchange rate), which is relatively low when compared to the rates of the major cities of the OECD countries.³ Hong Kong's electricity service is superbly reliable, thanks to the vast capital expenditures made under the Scheme of Control Agreement (SCA) (Woo et al., 2014).

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¹ <http://www.heritage.org/index/country/hongkong>.

² Hong Kong's ROR regulation of electricity service was first introduced in 1964 but it only applied to China Light and Power, one of the two local electric utilities.

³ https://www.clpgroup.com/ourcompany/aboutus/resourcecorner/investmentresources/Documents/2012/CLP_2012AR_English_Full.pdf, p. 43.

The current 58-page SCA is a bilaterally negotiated 10-year contract signed in 2008 between the HKSAR Government and each of the two local integrated investor-owned utilities (IOUs): China Light and Power (CLP) and Hong Kong Electric (HEC).⁴ It stipulates the two utilities' obligation to supply adequate and reliable electricity at affordable rates and the government's role in monitoring the financial affairs and operating performance of the utilities. In return, the utilities are allowed to charge tariffs that enable them to recover operating costs, make long-term investments, thereby fulfilling their obligation to serve.⁵

The SCA's contractual relationship is intended to last.⁶ Clause D of the current SCA states: "[t]he Government may introduce changes to the electricity supply regulatory framework after 30 September 2018, after consideration of market readiness and other relevant factors. The Government recognizes that the Companies [i.e., CLP and HEC] have made and may make during the scheme of control long-term investments and contractual commitments to meet the demand for electricity". Both the HKSAR Government and the utilities decided not to make major changes to the SCA after the final interim review conducted in 2013. Hence, any substantial changes to the electricity supply regulatory framework cannot occur prior to the 2018 expiration of the current SCA. Should the HKSAR Government and the utilities decide to exercise the option of a 5-year extension, such changes can only occur after 2023.

While the SCA does not have a franchise area provision, each utility has a *de facto* exclusive service area defined by its ownership of a non-duplicative transmission and distribution (T&D) network.⁷ The current SCA is due to expire in 2018 (or in 2023 after an optional 5-year extension), thus presenting an opportune time to consider possible changes with long lead time to improve the electricity industry's economic performance. These changes range from modifications of the SCA to a complete market restructuring.

The SCA embodies several salient aspects of electricity regulation. First, the initial 15-year SCA was created in 1964 at the behest of CLP and its business partner Exxon (Lam, 1996; Wu and Cheng, 2000), thus echoing the theory of demand for regulation (Jarrell, 1978).

Second, the SCA requires each IOU to provide safe, reliable, and environmentally friendly service at cost-based rates that reflect least-cost investment and operation, following the regulatory mandate described in Bonbright et al. (1988) and Swartwout (1992).

Third, the SCA is a formal contract, with long-term credible commitment to (a) the utilities that invest in capital-intensive and industry-specific assets and (b) their customers who ultimately pay for such investments at regulated rates (Goldberg, 1976). These rates are based on the U.S. ROR regulation described in Morin (2006).

Fourth, the SCA's permitted return on assets (ROA) is fixed for the entire contract period. Since an IOU's earned ROA is a weighted average of the IOU's return on equity (ROE) and cost of debt, the SCA encourages asset expansion and debt financing in a low-interest environment (Peles and Whittred, 1996; Lam, 1997; Morin,

Table 1
Demographics of respondents.

Demographic variable	Minimum	Maximum	Mean	Standard deviation
Gender=1 if male, 0 otherwise	0	1	0.47	0.50
Age (years)	22	70	43.11	15.60
Education (years)	6	16	12.70	3.47
Family size	1	4	3.30	0.89
Renter=1 if renting, 0 otherwise	0	1	0.50	0.50
Income (HK\$/month)	0	> 65,000	12,729	14,214

The sample's demographics are similar to those of the population based on the information available from the 2013 Hong Kong Annual Digest of Statistics (<http://www.statistics.gov.hk/pub/B10100032013AN13B0100.pdf>): (a) median age=42 years (p. 4); (b) male share of the population=0.465 (p. 4); (c) average education=12.4 years (p. 335); (d) median family size=2.9 (p. 12); (e) renter share: 0.48 (p. 214); and (f) median income=\$12,000 (p. 50).

2006).⁸ The current SCA's permitted ROA is 9.99%, slightly above CLP's earned ROA of 9.94% and HEC's earned ROA of 9.35% in 2012. Thanks to increased debt financing at the historically low interest rate since the 2008–2009 financial crisis, CLP's actual return on equity (ROE) was 19.73% and HKE's ROE was 31.91% (Woo et al., 2014, Table 1), far above the 10–12% allowed ROEs in the U.S. (PUF, 2012; Hyman, 2013).

Finally, Hong Kong does **not** have a public utilities commission (PUC) (Lam, 1997). A state PUC in the U.S. is an independent regulatory agency that develops and enforces relevant rules and regulations (Spulber, 1989, Chapter 2; Swartwout, 1992).⁹ The state PUC administers the public-hearing process (Brown, 1938; Lakusta, 1956; Moore, 2002), which may result in reductions in the regulated IOU's earnings (e.g., Lyon and Mayo, 2005).¹⁰

A series of papers published in this journal before the 2008 signing of the current SCA make three proposals to improve the economic performance of Hong Kong's electricity industry. The first proposal is to restructure the electricity industry (Lam, 2004; Chan, 2006), so as to lead to competitive markets for generation and customer service under open T&D access, as already been done in parts of North America, South America, Europe, and Australia (Sioshansi and Pfaffenberger, 2006; Sioshansi, 2013). The second proposal is to institute periodic reviews of the SCA's permitted ROA, akin to the general rate-case cycles in the U.S. (Luk, 2005, 2007). The third proposal is to implement performance-based regulation (PBR) (Ngan et al., 2006; Wang et al., 2007), so as to address the potential inefficiency of ROR regulation (Laffont and Tirole, 1993; Liston, 1993; Schmidt, 2000; Vogelsang, 2002). Implementing the first two proposals will require legislative support and action, as these proposals represent significant departures

⁸ To discourage over-investment, the current SCA (Schedule 7) reduces the local utility's revenue requirement, if the utility is determined to have excess generation capacity after a major capacity expansion.

⁹ There is empirical evidence challenging a PUC's presumed independence. To wit, the PUC's commissioners may be appointed or elected, with the latter being more pro-consumer (Costello, 1984; Besley and Coate, 2003). Moreover, the regulatory process can be pro-business or pro-consumer (Gormley, 1982; Gormley et al., 1983). Finally, the creation of consumer-advocate groups may lead to consumer capture of the PUC (Holburn and Spiller, 2002; Holburn and Vanden Bergh, 2006).

¹⁰ Examples of public participation in a PUC hearing can be found at: (a) "Having your say at an AUC hearing", Alberta Utilities Commission (http://www.auc.ab.ca/about-the-auc/auc-information/Documents/AUC_Information/AUC_information_havingYourSay_01.pdf); (b) "Informal Guide to Commission Proceedings", New Hampshire Public Utilities Commission (<http://www.puc.state.nh.us/regulatory/practiceguide.htm>); and (c) "We want to hear from you", "How your comments are processed", "Participation at CPUC Public Events", Public Advisor's Office, California Public Utilities Commission (<http://www.cpuc.ca.gov/PUC/about/Divisions/CSID/Public+Advisor/index.htm>).

⁴ Scheme of Control Agreement (SCA) with CLP Power Hong Kong Ltd., ExxonMobil Energy Ltd. and Castle Peak Power Co. Ltd., (http://www.EB.gov.hk/en/resources_publications/agreement/files/SCA_of_CLP_Eng.pdf); Scheme of Control Agreement (SCA) with Hong Kong Electric Co. Ltd. and Hong Kong Electric Holdings Ltd., (http://www.EB.gov.hk/en/resources_publications/agreement/files/SCA_of_HEC_Eng.pdf).

⁵ We thank a very helpful reviewer for his/her excellent clarification of the current SCA.

⁶ This paragraph is based on the insightful comment of the same reviewer noted in *supra* note 5.

⁷ With about 0.57 million customers, HKE serves Hong Kong Island, Ap Lei Chau and Lamma Island. With about 2.4 million customers, CLP serves the rest of Hong Kong, comprising Kowloon, the New Territories and Lantau Island.

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